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Kenneth L. Cage, Esquire
McDERMOTT, WILL & EMERY
600 13th Street, N.W.
WASHINGTON, DC 20005-3096

EXAMINER	
SELBY, GEVELL V	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,761	SHIBATANI ET AL.	
	Examiner	Art Unit	
	Gevell Selby	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11-16 and 18-20* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/21/08 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed 2/21/08 have been fully considered but they are not persuasive. The applicant submits the prior art does not disclose the following limitations of the claimed invention:

> wherein photoelectric conversion data (image data) is read out only for the area determined in accordance with the zoom ratio in the effective imaging area in the image sensor, such that only the predetermined area is photoelectically converted and only the obtained area is read out, as stated in claim 16. The Examiner respectfully disagrees.

Re Claim 16) The Matsushita reference discloses the image sensor driving section or zoom control section 15 controls the zoom lens to zoom in on a smaller section of the image and the image sensor outputs image data according to the zoom ratio wherein the area determined with the zoom ratio is the entire area of the image area, so the entire predetermined area is readout,

this reads on wherein photoelectric conversion data (image data) is read out only for the area determined in accordance with the zoom ratio in the effective imaging area in the image sensor, such that only the predetermined area is photoelectically converted and only the obtained area is read out.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 3/25/03. It is noted, however, that applicant has not filed a certified copy of the 2003-082148 application as required by 35 U.S.C. 119(b).

Claim Objections

5. Claims 3 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 3 and 4 state the following limitation of the previous claim: the image forming section is arranged to form an image of the front scene, with the image of an actual or imaginary converging point of the lane of the running path for the moving body being at the center of a frame of the formed image.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1, 3- 6, 9, 11-15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481 and Fukuda et al., JP 09-202180.**

In regard to claim 1, Nakamura et al., US 6,311,123, discloses a monitor device for displaying a front scene of a moving body with an image of an actual or imaginary converging point of a lane of a running path for the moving body being at a center of an image frame, comprising:

an image forming section (see figure 9, element 71) for forming a two dimensional image of the front scene of the moving body with the image of the actual or imaginary converging point of the lane of the running path for the moving body being at the center of the image frame (see figure 8: the running path of the car 2 in the lane converges in the center of the image) on a image plane (see column 8, lines 7-9 and 46-50);

an image sensor (see figure 9, element 71: CCD) for photo-electrically converting the two-dimensional image into electric image data (see column 8, lines 7-9);

a speed sensor (see figure 3, element 26 and figure 9, elements 6, 7, and 10) for detecting running speed of the moving body (see column 8, lines 10-12); and

an image enlarging section for processing the image data processed by the image area selecting section to enlarge the image of the selected area (see column 8, lines 13-16).

The Nakamura reference does not disclose the following:

a zoom ratio determining section for determining a zoom ratio in accordance with the detected running speed;

the image area selecting section processes the image data to select, in accordance with the determined zoom ratio, an area of the image formed by the image forming section;

the image enlarging section processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio determined by the zoom ratio determining section; and

a display for displaying the image of the area enlarged by the image enlarging section.

Matsushita, JP 07-105481, discloses a monitor device comprising:

a zoom ratio determining section (image processing section 14) for determining a zoom ratio or angle in accordance with the detected running speed (see para. 28);

the image area selecting section (zoom control section 15) processes the image data to select, in accordance with the determined zoom ratio or angle, the central area of the image formed by the image forming section (see para. 29); and

the image enlarging section (image processing section 14) processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio or angle determined by the zoom ratio or angle determining section (see para 31-32);

a display for displaying the image of the area enlarged by the image enlarging section (see figure 11b).

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, to have a zoom ratio determining section for determining a zoom ratio in accordance with the detected running speed; the image area selecting section processes the image data to select, in accordance with the determined zoom ratio, an area of the image formed by the image forming section; and the image enlarging section processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio determined by the zoom ratio determining section, a display for displaying the image of the area enlarged by the image enlarging section, in order to automatically adjust the zoom according to the speed to better identify the imaged object.

The Nakamura and Matsushita references do not disclose wherein the image forming section includes a distortion lens having a characteristic of forming an image, with a height of the image being larger in a central area and smaller in a peripheral area so as to allow the central area of the image to have a high resolution.

Fukuda, JP 09-202180, discloses a monitor device for forming a two dimensional image wherein the image forming section includes a distortion lens (fisheye lens 21 and para 7). It is implied the fisheye lens of the Fukuda reference is a distortion lens having characteristics to form an image with its height of image being larger in central area and smaller in peripheral area, since those are the characteristics of a fisheye lens.

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, wherein the image forming section includes a distortion lens having a characteristic of forming an image, with a height of the image being larger in a central area and smaller in a peripheral area so as to allow the central area of the image to have a high resolution, in order to capture an image of a larger area in the center of the image taking region, thus producing a higher quality image in the region of interest to allow the system to identify the object in the image.

In regard to claim 11, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 1. The Matsushita reference discloses further comprising a resizing section (zoom control section 15) for processing the image data of the selected area to enlarge the image to be displayed in entire area of a display screen of the display (see figure 11b).

In regard to claims 12 and 20, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claims 1 and 11, respectively. The Nakamura reference further comprising an object detecting unit (millimeter wave radar) for detecting whether the image data

include a data of an image of an unexpected object (see column 8, lines 10-15), and a speed control section (see figure 9, element 25) for controlling the moving body in accordance with the detection by the object detecting unit (see column 8, lines 28-32).

In regard to claim 3, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 1. The Nakamura reference discloses wherein the image forming section is arranged to form an image of the front scene, with the image of an actual or imaginary converging point of the lane of the running path for the moving body being at the center of a frame of the formed image (see figure 8: the running path of the car 2 in the lane converges in the center of the image).

In regard to claims 4 and 18, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claims 1 and 12, respectively. The Matsushita reference discloses further comprising a lens characteristics control section (zoom control section 15) for controlling the characteristics of the distortion lens such that the height of the image becomes larger as the speed of the moving body increases (see abstract).

In regard to claim 5, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 4. The Matsushita reference discloses wherein the lens characteristics control section controls the characteristics of the distortion lens such that the ratio of changing of the height of image per unit change of angle of view is larger when the speed of the moving body is high (see abstract).

In regard to claim 6, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 1. The Nakamura and Matsushita references do not disclose an image data processing section for processing the image data to correct distortion of the image taken by the distortion lens.

The Fukuda reference discloses further comprising a coordinate transformation circuit 31 for processing the image data to correct distortion of the image taken by the distortion lens (see abstract).

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, to have an image data processing section for processing the image data to correct distortion of the image taken by the distortion lens, in order to correctly depict the captured image to improve the image quality.

In regard to claims 9 and 19, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claims 1 and 11, respectively. The Fukuda reference discloses wherein the speed sensor includes a speed classifying section for determining which of a plurality of speed ranges a detected speed belongs (see abstract: speed range below reference view angle and speed range above reference view angle), the zoom ratio determining section determines the zoom ratio in accordance with the determined range, the image area selecting section selects area of the image in accordance with the determined range (see

abstract: the zoom control section zooms in or selects a smaller image area, if in the range above the reference and zooms out or selects a larger image area, if in the range below the reference), and the monitor device further comprising a resizing section for processing the image data of the selected area to enlarge the image to be displayed in entire area of a display screen of the display (see figure 8b and figure 10b).

In regard to claim 13, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 12. The Nakamura reference discloses wherein the speed control section controls the moving body to reduce the speed of the moving body when the unexpected object is detected in the image data (see column 8, lines 28-32: when the vehicle is detected the operator controls the speed of the object to stop it).

In regard to claim 14, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 1. The Nakamura reference discloses wherein the image forming section is arranged to form an image of the front scene, with the image of an actual or imaginary converging point of the lane of the running path for the moving body being at the center of a frame of the formed image (see figure 8: the running path of the car 2 in the lane converges in the center of the image).

In regard to claim 15, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, discloses the monitor device according to claim 13. The Nakamura and Matsushita references do not disclose wherein the image enlarging section for processes the image data processed by the image area selecting

section to enlarge the image of the selected area radially towards its periphery with its central image remaining at the center.

Fukuda, JP 09-202180, discloses a monitor device wherein the image forming section includes a distortion lens (fisheye lens 21) having characteristics to form an image with its height of image being larger in central area and smaller in peripheral area (see para. 7). The Fukuda reference discloses further comprising a coordinate transformation circuit 31 for processing the image data to correct distortion of the image taken by the distortion lens (see abstract).

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, to have the image enlarging section for processes the image data processed by the image area selecting section to enlarge the image of the selected area radially towards its periphery with its central image remaining at the center, in order to capture an image of a larger area in the center of the image taking region while allowing the user to view enhanced zoomed target center of the image.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481 and Fukuda et al., JP 09-202180, as applied to claim 1 above, and further in view of Oka et al., US 6,828,994.

In regard to claims 7 and 8, Nakamura et al., US 6,311,123, in view of Matsushita, JP 07-105481 and Fukuda et al., JP 09-202180, discloses a monitor device according to claim 1, further comprising:

a housing incorporating the image forming section and the image sensor (see figure 3, elements 140, 142).

The Matsushita, Nakamura, and Fukuda references do not disclose further comprising:

a tilting/panning acceleration sensor for detecting acceleration in the movement of the housing in the tilting/panning direction;

a tilting/panning drive calculating section for calculating amount of driving of the housing to offset the movement of the housing; and

a driving section for driving the housing in accordance with the amount of driving calculated by the tilting/panning drive calculating section.

Oka et al., US 6,828,994, discloses a monitoring device comprising:

a tilting/panning acceleration sensor (moving sensor part 91) for detecting acceleration in the movement of the housing in the tilting/panning direction (see column 9, lines 16-23);

a tilting/panning drive calculating section (controller 92) for calculating amount of driving of the housing to offset the movement of the housing (see column 9, lines 24-38); and

a driving section (pant/tilt mechanism 5) for driving the housing in accordance with the amount of driving calculated by the tilting/panning drive calculating section (see column 5, lines 6-18).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Nakamura et al., US 6,311,123, in

view of Matsushita, JP 07-105481 and Fukuda et al., JP 09-202180, and farther in view of Oka et al., US 6,828,994, to have a tilting/panning acceleration sensor for detecting acceleration in the movement of the housing in the tilting/panning direction;

a tilting/panning drive calculating section for calculating amount of driving of the housing to offset the movement of the housing; and

a driving section for driving the housing in accordance with the amount of driving calculated by the tilting/panning drive calculating section, in order to for the user to be able to remotely move the camera, thus giving the camera more imaging range.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poland et al., US 6,681,195, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180.

In regard to claim 16, Poland et al., US 6,681,195, discloses a monitor device for displaying a front scene of a moving body, comprising:

an image forming section (see figure 1, element 142) for forming a two dimensional image of the front scene on a image plane (see column 7, lines 8-15);

an image sensor (see figure 1, element 140) for photo-electrically converting the two-dimensional image into electric image data (see column 6, lines 5-15);

a speed sensor (see figure 1, element 130) for detecting running speed of the moving body (see column 5, lines 55-67);

an image sensor driving section (see figure 1, element 110) for driving the image sensor to change the photo-electrically converted area of the two dimensional image in accordance with the determined zoom ratio (see column 6, line 57 to column 7, line 20: processor commands the lens to be driven according imaging parameters such as resolution can be automatically set to obtain a clear, high quality image);

an image enlarging section (see figure 1, element 160) for processing the image data processed by the image area selecting section to enlarge the image of the selected area (see column 10, lines 42-50); and

a display (see figure 1, element 112) for displaying the image of the area enlarged by the image enlarging section (see column 8, lines 25-28).

The Poland reference does not disclose the following:

a zoom ratio determining section for determining a zoom ratio in accordance with the detected running speed;

an image sensor driving section for driving the image sensor to change the photo-electrically converted area of the two dimensional image in accordance with the determined zoom ratio so as to make the image sensor output image data in accordance with the determined zoom ratio; and

the image enlarging section processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio determined by the zoom ratio determining section, wherein photoelectric conversion data (image data) is read out only for the area

determined in accordance with the zoom ratio in the effective imaging area in the image sensor, such that only the predetermined area is photoelectically converted and only the obtained area is read out.

Matsushita, JP 07-105481, discloses a monitor device comprising:

a zoom ratio determining section (image processing section 14) for determining a zoom ratio or angle in accordance with the detected running speed (see para. 28);

an image sensor driving section (see figure 1, element 15) for driving the image sensor to change the photo-electrically converted area of the two dimensional image in accordance with the determined zoom ratio so as to make the image sensor output image data in accordance with the determined zoom ratio (see para 30-33: the image sensor driving section or zoom control section 15 controls the zoom lens to zoom in on a smaller section of the image and the image sensor outputs image data according to the zoom ratio); and

the image enlarging section (image processing section 14) processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio or angle determined by the zoom ratio or angle determining section (see para 31-32), wherein photoelectric conversion data (image data) is read out only for the area determined in accordance with the zoom ratio in the effective imaging area in the image sensor, such that only the predetermined area is photoelectically converted and only the obtained area is

read out (see para 30-33: the area determined with the zoom ratio is the entire area of the image area, so the entire predetermined area is readout).

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Poland et al., US 6,681,195, in view of Matsushita, JP 07-105481, to have an image sensor driving section for driving the image sensor to change the photo-electrically converted area of the two dimensional image in accordance with the determined zoom ratio so as to make the image sensor output image data in accordance with the determined zoom ratio; and the image enlarging section processes the image data processed by the image area selecting section to enlarge the image of the selected area with the zoom ratio determined by the zoom ratio determining section, wherein photoelectric conversion data (image data) is read out only for the area determined in accordance with the zoom ratio in the effective imaging area in the image sensor, such that only the predetermined area is photoelectically converted and only the obtained area is read out, in order to automatically adjust the zoom according to the speed to better identify the imaged object.

The Poland and Matsushita references do not disclose wherein the image forming section includes a distortion lens having a characteristic of forming an image, with a height of the image being larger in a central area and smaller in a peripheral area so as to allow the central area of the image to have a high resolution.

Fukuda, JP 09-202180, discloses a monitor device for forming a two dimensional image wherein the image forming section includes a distortion lens (fisheye lens 21 and para 7). It is implied the fisheye lens of the Fukuda reference is a distortion lens having

characteristics to form an image with its height of image being larger in central area and smaller in peripheral area, since those are the characteristics of a fisheye lens.

It would have been obvious to one of ordinary skill in the art to have been motivated at the time of invention to modify Poland et al., US 6,681,195, in view of Matsushita, JP 07-105481, and Fukuda, JP 09-202180, wherein the image forming section includes a distortion lens having a characteristic of forming an image, with a height of the image being larger in a central area and smaller in a peripheral area so as to allow the central area of the image to have a high resolution, in order to capture an image of a larger area in the center of the image taking region, thus producing a higher quality image in the region of interest to allow the system to identify the object in the image.

Allowable Subject Matter

10. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs

/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622